

BEST AVAILABLE COPY

**STIC Biotechnology Systems Branch**



**RAW SEQUENCE LISTING**  
**ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/910,354A  
Source: JFW/16  
Date Processed by STIC: 3-4-05

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.2.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail. Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom. Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - cPAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 01/14/05): U.S. Patent and Trademark Office, Mail Stop Sequence, Customer Window, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

Revised 01/24/05

# Raw Sequence Listing Error Summary

## ERROR DETECTED

## SUGGESTED CORRECTION

SERIAL NUMBER

09/9101354A

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

1 Wrapped Nucleic The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .5; this will prevent "wrapping."

2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.

3 Misaligned Amino Numbering The numbering under each 5' amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.

4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.

5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.

6 PatentIn 2.0 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s). Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.

7 Skipped Sequences (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:  
(2) INFORMATION FOR SEQ ID NO X (insert SEQ ID NO where "X" is shown)  
(i) SEQUENCE CHARACTERISTICS (Do not insert any subheadings under this heading)  
(ii) SEQUENCE DESCRIPTION SEQ ID NO X (insert SEQ ID NO where "X" is shown)  
This sequence is intentionally skipped.

Please also adjust the "(iii) NUMBER OF SEQUENCES" response to include the skipped sequences.

8 Skipped Sequences (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:  
<210> sequence id number  
<400> sequence id number  
000

9 Use of n's or Xaa's (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing. Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present. In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

10 Invalid <21> Response Per 1.823 of Sequence Rules, the only valid <21> responses are Unknown, Artificial Sequence, or Scientific Name (Genus/Species). <220>-<223> section is required when <21> response is Unknown or Artificial Sequence.

11 Use of <220> Sequence(s) missing the <220> feature and associated numeric identifiers and responses. Use of <220> to <223> is MANDATORY if <21> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules).

12 PatentIn 2.0 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.

13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid.



IFW16

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/910,354A

DATE: 03/04/2005  
 TIME: 14:13:10

Input Set : A:\pto.da.txt  
 Output Set: N:\CRF4\03032005\I910354A.raw

3 <110> APPLICANT: Jarrell, et al.,  
 W--> 4 <120> TITLE OF INVENTION: Modular Vector Systems  
 6 <130> FILE REFERENCE: 2003320-0032  
 8 <140> CURRENT APPLICATION NUMBER: 09/910,354A  
 9 <141> CURRENT FILING DATE: 2001-07-20  
 11 <160> NUMBER OF SEQ ID NOS: 24  
 13 <170> SOFTWARE: PatentIn version 3.2  
 15 <210> SEQ ID NO: 1  
 16 <211> LENGTH: 23  
 17 <212> TYPE: DNA  
 18 <213> ORGANISM: PCR primer EU-1 for amplification of a vector fragment containing  
 W--> 19 bacterial origin of replication, Lac I gene, and pT7 promoter.  
 21 <400> SEQUENCE: 1  
 22 cauggtatat ctccttctta aag  
 25 <210> SEQ ID NO: 2  
 26 <211> LENGTH: 22  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: PCR primer Eu-2 for amplification of a vector fragment containing  
 W--> 29 bacterial origin of replication, Lac I gene, and pT7 promoter.  
 31 <400> SEQUENCE: 2  
 32 cucatgacca aaatccctta ac  
 35 <210> SEQ ID NO: 3  
 36 <211> LENGTH: 22  
 37 <212> TYPE: DNA  
 38 <213> ORGANISM: PCR primer EU-3 for amplification of a vector fragment containing Amp  
 W--> 39 gene.  
 41 <400> SEQUENCE: 3  
 42 gagattatca aaaaggatct tc  
 45 <210> SEQ ID NO: 4  
 46 <211> LENGTH: 20  
 47 <212> TYPE: DNA  
 48 <213> ORGANISM: PCR primer EU-4 for amplification of a vector fragment containing Amp  
 W--> 49 gene.  
 51 <400> SEQUENCE: 4  
 52 uaactagcat aacccttgg  
 55 <210> SEQ ID NO: 5  
 56 <211> LENGTH: 21  
 57 <212> TYPE: DNA  
 58 <213> ORGANISM: PCR primer 5' Lac Z for amplification of an insert fragment containing  
 W--> 59 Lac Z gene.  
 61 <400> SEQUENCE: 5  
 62 augaccatga ttacgccaac g  
 65 <210> SEQ ID NO: 6

see item #  
 10 on error  
 Does Not Comply  
 Corrected Diskette Needed  
 Summary Sheet (pg. 1-4)

Invalid<sup>23</sup>  
 response

Invalid<sup>22</sup>  
 response

Invalid<sup>22</sup>  
 response

Invalid<sup>20</sup>  
 response

Invalid<sup>21</sup>  
 response

FYI: ↑ The above responses can be inserted into section

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/910,354A

DATE: 03/04/2005

TIME: 14:13:10

Input Set : A:\pto.da.txt

Output Set : N:\CRF4\03032005\I910354A.raw

CSAME errors

66 <211> LENGTH: 22  
 67 <212> TYPE: DNA  
 68 <213> ORGANISM: PCR primer 3' Lac Z for amplification of an insert fragment containing  
 W--> 69 Lac Z gene.  
 71 <400> SEQUENCE: 6  
 72 uuacaatttc cattcgccat tc 22  
 75 <210> SEQ ID NO: 7  
 76 <211> LENGTH: 37  
 77 <212> TYPE: DNA  
 78 <213> ORGANISM: PCR primer 5' OST for amplifying an Ori fragment from pET 19 b.  
 80 <400> SEQUENCE: 7  
 81 ctgctaagtg agcucgacag atcgctgaga taggtgc 37  
 84 <210> SEQ ID NO: 8  
 85 <211> LENGTH: 36  
 86 <212> TYPE: DNA  
 87 <213> ORGANISM: PCR primer 1N 3' Ori(s) for amplifying an Ori fragment from pET 19b.  
 89 <400> SEQUENCE: 8  
 90 aagcttgcta agtagggcgt tttccatag gctccg 36  
 93 <210> SEQ ID NO: 9  
 94 <211> LENGTH: 36  
 95 <212> TYPE: DNA  
 96 <213> ORGANISM: PCR primer 1NT5' KAN for amplifying a fragment containing the kanamycin  
 W--> 97 resistance gene from pCR2.1 topo.  
 99 <400> SEQUENCE: 9  
 100 ctacctagca agctuctatc tggacaaggg aaaacg 36  
 103 <210> SEQ ID NO: 10  
 104 <211> LENGTH: 41  
 105 <212> TYPE: DNA  
 106 <213> ORGANISM: PCR primer T73' KAN for amplifying a fragment containing the  
 kanamycin  
 W--> 107 resistance gene from pCR2.1 topo.  
 109 <400> SEQUENCE: 10  
 110 ccctatagtg agtcgtatta aggcgaaaac tctcaaggat c 41  
 113 <210> SEQ ID NO: 11  
 114 <211> LENGTH: 42  
 115 <212> TYPE: DNA  
 116 <213> ORGANISM: PCR primer tcs1 for amplifying a fragment containing the luciferase  
 gene  
 W--> 117 from pG1 II basic.  
 119 <400> SEQUENCE: 11  
 120 ttaatacgac tcactatagg gatggaagac gccaaaaaca ta 42  
 123 <210> SEQ ID NO: 12  
 124 <211> LENGTH: 36  
 125 <212> TYPE: DNA  
 126 <213> ORGANISM: PCR primer tc58 for amplifying a fragment containing the luciferase  
 gene  
 W--> 127 from pG1 II basic.  
 129 <400> SEQUENCE: 12  
 130 gagctcaatt agcagttaca atttggactt tccgcc  
 133 <210> SEQ ID NO: 13  
 134 <211> LENGTH: 36  
 135 <212> TYPE: DNA

see item #  
 10 on error  
 summary sheet

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/910,354A

DATE: 03/04/2005  
TIME: 14:13:10

✓ Sample errors  
↓

Input Set : A:\pto.da.txt  
Output Set : N:\CRF4\03032005\I910354A.raw

136 <213> ORGANISM: PCR primer 1NT 5'KAN for amplifying a fragment containing the kanamycin

W--> 137 resistance gene from PCR 2.1 topo.

139 <400> SEQUENCE: 13 36

140 ctacctagca agctuctatc tggacaaggg aaaacg

143 <210> SEQ ID NO: 14

144 <211> LENGTH: 33

145 <212> TYPE: DNA

146 <213> ORGANISM: PCR primer 1NT 3'KAN for amplifying a fragment containing the kanamycin

W--> 147 resistance gene from PCR 2.1 topo.

149 <400> SEQUENCE: 14 33

150 gagctcactt agcaaggcga aaactctcaa gga

153 <210> SEQ ID NO: 15

154 <211> LENGTH: 37

155 <212> TYPE: DNA

156 <213> ORGANISM: PCR primer 1NT5' Ori for amplifying a fragment containing the Ori from

W--> 157 pET 19b.

159 <400> SEQUENCE: 15 37

160 ttgctaagt agcucgacag atcgctgaga taggtgc

163 <210> SEQ ID NO: 16

164 <211> LENGTH: 36

165 <212> TYPE: DNA

166 <213> ORGANISM: PCR primer 1N3' Ori(s) for amplifying a fragment containing the Ori from

W--> 167 pET 19b

169 <400> SEQUENCE: 16 36

170 aagcttgcta agtagggcgt ttttccatag gctccg

173 <210> SEQ ID NO: 17

174 <211> LENGTH: 37

175 <212> TYPE: DNA

176 <213> ORGANISM: PCR primer 3nt 5'OST for amplifying an Ori fragment.

178 <400> SEQUENCE: 17

179 ctgctaagt agcucgacag atcgctgaga taggtgc 37

182 <210> SEQ ID NO: 18

183 <211> LENGTH: 36

184 <212> TYPE: DNA

185 <213> ORGANISM: PCR primer 3nt 5'OST for amplifying an Ori fragment.

187 <400> SEQUENCE: 18

188 aagcttgcta gguaggctac gtcttgctgg cgttcg 36

191 <210> SEQ ID NO: 19

192 <211> LENGTH: 36

193 <212> TYPE: DNA

194 <213> ORGANISM: PCR primer 3nt 5'KHT for amplifying a KAN fragment.

196 <400> SEQUENCE: 19

197 ctacctagca agcuuctatc tggacaaggg aaaacg 36

200 <210> SEQ ID NO: 20

201 <211> LENGTH: 35

202 <212> TYPE: DNA

203 <213> ORGANISM: PCR primer 3nt 3'KST for amplifying an Ori(s) fragment.

205 <400> SEQUENCE: 20

206 gagctcactt agcagggcga aaactctcaa ggatc 35

↑ see item #10 on error summary sheet

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/910,354A

DATE: 03/04/2005  
TIME: 14:13:10

Input Set : A:\pto.da.txt  
Output Set: N:\CRF4\03032005\I910354A.raw

✓ Same errors

209 <210> SEQ ID NO: 21  
210 <211> LENGTH: 37  
211 <212> TYPE: DNA  
212 <213> ORGANISM: PCR primer 1NT 5'ORI for amplifying an Ori(s) fragment.  
214 <400> SEQUENCE: 21  
215 ttgctaagtg agctcgacag atcgctgaga taggtgc 37  
218 <210> SEQ ID NO: 22  
219 <211> LENGTH: 36  
220 <212> TYPE: DNA  
221 <213> ORGANISM: PCR primer 1NT3' Ori(s) for amplifying an Ori(s) fragment.  
223 <400> SEQUENCE: 22  
224 aagcttgcta ggtagggcgt tttccatag gctccg 36  
227 <210> SEQ ID NO: 23  
228 <211> LENGTH: 36  
229 <212> TYPE: DNA  
230 <213> ORGANISM: PCR primer 1NT 5'KAN for amplifying an KAN fragment.  
232 <400> SEQUENCE: 23  
233 ctacctagca agctuctatc tggacaaggg aaaacg 36  
236 <210> SEQ ID NO: 24  
237 <211> LENGTH: 33  
238 <212> TYPE: DNA  
239 <213> ORGANISM: PCR primer 1NT3'KAN for amplifying an Ori(s).  
241 <400> SEQUENCE: 24  
242 gagctcactt agcaaggcga aaactctcaa gga 33

↗ See item #10 on  
error summary sheet

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/910,354A

DATE: 03/04/2005  
TIME: 14:13:11

Input Set : A:\pto.da.txt  
Output Set: N:\CRF4\03032005\I910354A.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:11; Line(s) 116

Seq#:12; Line(s) 126

## VERIFICATION SUMMARY

DATE: 03/04/2005

PATENT APPLICATION: US/09/910,354A

TIME: 14:13:11

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\03032005\I910354A.raw

L:4 M:283 W: Missing Blank Line separator, <120> field identifier  
L:19 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:29 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:39 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:49 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:59 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:69 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:97 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:107 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:117 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:127 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:137 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:147 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:157 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:  
L:167 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**